Instruction Manual

Backup Camera System with Waterproof Quad View Monitor and Heated Camera

RVS-8129900Q

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NOTE!

Please read all of the installation instructions carefully before installing the product. Improper installation will void manufacturer’s warranty.

Congratulations on purchasing a Rear View Backup Camera System!

With this manual you will be able to properly install and operate the unit.

The Backup Camera System is intended to be installed as a supplement aid to your standard rear view mirror that already exists in your vehicle. The Backup Camera System should not be used as a substitute for the standard rear view mirror or for any other mirror that exists in your vehicle.

In some jurisdictions, it is unlawful for a person to drive a motor vehicle equipped with a TV viewer or screen located forward of the back of the driver’s seat or in any location that is visible, directly or indirectly, to the driver while operating the vehicle.
Please read the entire manual and follow the instructions and warnings carefully. Failure to do so can cause serious damage and/or injury, including loss of life. Be sure to obey all applicable local traffic and motor vehicle regulations as it pertains to this product. Improper installation will void manufacturer’s warranty.

**USAGE:**

- The Rear View Camera System is designed to help the driver safely detect people and/or objects, helping to avoid damage or injury. However, you the driver, must use it properly. Use of this system is not a substitute for safe, proper or legal driving.

- Never back up while looking at the monitor alone. You should always check behind and around the vehicle when backing up, in the same way as you would if the vehicle did not have the Rear View Camera System. If you back up while looking only at the monitor, you may cause damage or injury. Always back up slowly.

- The Rear View Camera System is not intended for use during extensive back-up maneuvers or backing into cross traffic or pedestrian walkways.

- Please, always remember, the area displayed by the Rear View Camera System is limited. It does not display the entire panorama that is behind you.
INSTALLATION:

- Electric shock or product malfunction may occur if this product is installed incorrectly.

- Use this product within the voltage range specified. Failure to do so can cause electronic shock or product malfunction.

- Take special care when cleaning the monitor.

- Make sure to firmly affix the product before use.

- If smoke or a burning smell is detected, disconnect the system immediately.

- Cover the power cable with friction tape where it may touch a metal case. A short circuit or disconnected wire may cause a fire.

- While installing the Rear View System be careful with the wire positioning in order to avoid wire damage.

- The Rear View System should only be used when the vehicle is in reverse.

- Do not watch movies or operate the monitor while driving; as it may cause an accident.

- Do not install the monitor where it may obstruct drivers view or obstruct an air bag device.

- Dropping the unit may cause possible mechanical failure.
If you have questions about this product, contact:

Rear View Safety
1797 Atlantic Avenue
Brooklyn, NY 11233
Tel: 1.800.764.1028

IN NO EVENT SHALL SELLER OR MANUFACTURER BE LIABLE FOR ANY DIRECT OR CONSEQUENTIAL DAMAGES OF ANY NATURE, OR LOSSES OR EXPENSES RESULTING FROM ANY DEFECTIVE PRODUCT OR THE USE OF ANY PRODUCT.
Before drilling please check that no cable or wiring is on the other side of the wall. Please clamp all wires securely to reduce the possibility of them being damaged while vehicle is in use. Keep all cables away from hot or moving parts and electrical noisy components.

*We recommend doing a benchmark test before installation to insure that all components are working properly.*

Step 1: Choose the monitor and camera locations.

Step 2: Install all cables in vehicle, when necessary a 0.8 (20mm) hole should be drilled for passing camera cable through vehicles walls. Install split grommets where applicable.

Step 3: Once all cables and wiring have been properly routed, perform a system function test by temporarily connecting the system. If the system seems to not be operating properly see troubleshooting (page 27).
Wiring

After connecting the monitor to the power harness, plug the camera into the CAM 3 input. Connect the RED 12V power wire to an ignition power source and the BLACK 12V ground wire to a chassis ground. The BROWN wire is the REVERSE trigger wire. Connect this wire to the vehicle’s backup light circuit to activate the rear view image whenever the vehicle shifts into reverse. To attach a second camera, connect it to the CAM 1 input.
Precautions For Use Of Monitor

I. The monitor is made of glass and plastic. Do not subject it to a mechanical shock by dropping it from a high place, etc.

II. Do not apply excessive force to the monitor surface or the adjoining areas since this may cause the color tone to vary.

III. Only clean with a soft dry cloth and/or Windex.

IV. Do not attempt to disassemble the mirror monitor.

Safety

• Before drilling, be sure no cable or wire is on the other side.
• Feed as much cable as possible into vehicle & clamp securely. This reduces the possibility of cable being hooked or snagged.
Components

- Monitor
- Remote Control
- Power Harness
- Swivel Head Mount
- Removable Sunshade
- U-Bracket With Mounting Screws

Waterproof Camera
7” Waterproof Quad View Monitor with a TFT LCD digital color touch screen display. Monitor comes with a U-Bracket, swivel head mount, and a waterproof rating of IP69K.

- 7” Quad View Display with multiple viewing options
- Completely waterproof - IP69K
- Touch screen display
- Optional distance grid lines
- Built-in speaker
### Monitor Dimensions

| Dimension       | 7”  
|-----------------|-----
| TV System       | NTSC/ PAL  
| Resolution      | 800 x 3 (RGB) x 480  
| Brightness      | 400 cd/m²  
| Contrast        | 500 :1  
| Viewing Angle   | U: 50°/ D: 60°, R/L: 70°  
| Aspect Ratio    | 16:9  
| Operating Temperature | -10 ~ +65°C  
| Storage Temperature | -30 ~ +80°C  
| Power Consumption | Max. 25W  
| Power for Cameras | Max. 4×300mA, 12V  
| Dot Pitch       | 0.192 (H) x 0.1805 (V)  
| Video Inputs    | 4 Video Inputs, 1 DVD Input  
| Audio Inputs    | 4 Audio Inputs; 1 DVD input  
| Video Outputs   | 1 Rec Video Output  
| Audio Output    | 1 Live Audio Output  
| Waterproof Rating | IP69K  
| Touch Screen Transmittance | ≥80%  
| Screen Operation Pressure | 10~110g  
| Screen Response Time | <10ms  

Rear View Safety
Swivel Head Mount
1. Remote control signal sensor
2. Power button
3. Increase / decrease volume and switch sub-menu values
4. Menu selection and toggle display mode (SINGLE/DUAL/TRIPLE/QUAD/PIP IMAGE)
5. Menu button
6. Jump Key - Immediately view predetermined display mode
Connections

A Camera 4
1. AUX audio input
2. White: Audio output
3. Green: Trigger 3
4. Black: Ground

B Camera 3
5. Green: Rec. V. output
6. White: Trigger 1
7. Brown: Trigger 4
8. Red: Power

C Camera 2
9. Yellow: Live V. output
10. Blue: Trigger 2
11. Yellow: Split trigger

D Camera 1

3A FUSE
1. MUTE: MUTE / UNMUTE volume
2. POWER: Turn monitor ON / OFF
3. MENU: Toggle between menus
4. UP: Toggle selection UP
5. DN: Toggle selection DOWN & toggle display mode (SINGLE/DUAL/TRIPLE/QUAD/PIP IMAGE)
6. VOL: Decrease volume & toggle sub-menu values
7. VOL: Increase volume & toggle sub-menu values
8. MODE: Toggle display mode (SINGLE/DUAL/TRIPLE/QUAD/PIP IMAGE)
9. SEL.: Toggle jump key
10. P/N: Toggle between PAL/NTSC
11. LANG: Toggle language
12. REST: Restore factory settings
13. AV: Enter/leave DVD channel
**On-Screen Display (OSD)**

- **SCALE**: Toggle distance grid lines ON/OFF. When ON, distance grid lines will be displayed when backup camera (CAM 3) is triggered.
- **INPUT SCAN**: Toggle camera input auto identification. When ON, monitor will display connected cameras and skip inputs not connected.
- **BOUNDARY**: Toggle border color between camera inputs (WHITE/GRAY/BLACK/UNCOLORED).
- **LANGUAGE**: Toggle OSD language (ENGLISH/FRENCH/DUTCH/SPANISH/German).
- Software version appears under LANGUAGE.
**Trigger Setting**

- **TURN IMAGE**: Display options when side cameras (CAM 1, CAM 2) are triggered. When on SINGLE, the corresponding camera will display when either camera is triggered. When on SPLIT, a split image of side and rear view camera will be displayed when either side camera is triggered.
- **REAR IMAGE**: Display options when backup camera is triggered. When on BACK, just the backup camera will display when triggered. When set as TRIPLE, the left, right, and backup camera will simultaneously display.
- **TRIGGER DELAY**: Toggle duration (seconds) of video display when trigger signal goes off (0-30 seconds).
- **SPLIT SCREEN**: Display options when “SPLIT” trigger wire is activated.
- **AUDIO**: Toggle audio output.
• **REC-V OUT:** Toggle which camera view will record when a DVR is attached (LEFT/RIGHT/FRONT/QUAD).

• **AUTOSCANN:** When setting is ON, the monitor automatically switches between connected camera inputs and quad view.

• **SCAN DELAY:** Toggle AUTOSCANN delay (0-60 seconds).

• **JUMP KEY:** Toggle jump key destination. Select from 13 display modes as shown on the left.

• **POWER ON:** Toggle default display mode. Select from 13 display modes as shown on the left.

• **BEEP:** Control audible alert (beep) when buttons are pressed. Turn ON/OFF.

• **SYSTEM:** Toggle PAL / NTSC.

• **DIMMER:** Toggle screen backlighting brightness. Choose from 5 levels and AUTO. When AUTO is selected, backlighting automatically adjusts in accordance with brightness conditions.
When in quad view, press any channel to view full screen
**Touch screen menu**

1. **MODE**
   - Touch
   - The previous display mode
   - The display mode preset in JUMP KEY

2. **JUMP**
   - Touch
   - The previous display mode
   - The display mode preset in JUMP KEY

3. **Sound**
   - Touch

4. **Brightness increase / decrease**
Exchange picture locations of any two cameras displayed in multi-viewing mode
Swap display position (dual/triple view)

Long press (>3s)

Keep touching; use another finger to touch the desired channel emerged on top

Release fingers
**Switch to next display mode**

![Diagram showing how to switch to next display mode](image)

**Switch to previous display mode**

![Diagram showing how to switch to previous display mode](image)
Camera Dimensions
**Camera Specifications**

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<th>Feature</th>
<th>Specification</th>
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<tr>
<td>Image Device</td>
<td>1/3” SONY® Super HAD CCD</td>
</tr>
<tr>
<td>TV System</td>
<td>PAL/NTSC</td>
</tr>
<tr>
<td>Total Number Of Pixels</td>
<td>PAL: 537 (H) x 597 (V) / NTSC: 537 (H) x 505 (V)</td>
</tr>
<tr>
<td>Effective Pixels</td>
<td>PAL: 500 (H) x 582 (V) / NTSC: 510 (H) x 492 (V)</td>
</tr>
<tr>
<td>Sensing Area</td>
<td>4.9 mm (H) x 3.7 mm(V)</td>
</tr>
<tr>
<td>Sync. System</td>
<td>Internal</td>
</tr>
<tr>
<td>Resolution</td>
<td>700 TV Lines</td>
</tr>
<tr>
<td>Minimum Illumination</td>
<td>0 lux (with IR)</td>
</tr>
<tr>
<td>Microphone</td>
<td>Yes</td>
</tr>
<tr>
<td>Video Output</td>
<td>Composite Signal (1.0 v p - p, 75 Ω)</td>
</tr>
<tr>
<td>Gamma Correction</td>
<td>0.45</td>
</tr>
<tr>
<td>AGC</td>
<td>On</td>
</tr>
<tr>
<td>S/N Ratio</td>
<td>Better than 48db</td>
</tr>
<tr>
<td>White Balance</td>
<td>Auto</td>
</tr>
<tr>
<td>Electronic Shutter</td>
<td>1-50-1/100,000 sec. / 1/60-1/100,000 sec.</td>
</tr>
<tr>
<td>BLC</td>
<td>Auto</td>
</tr>
<tr>
<td>Current Consumption</td>
<td>Max. 300 ma</td>
</tr>
<tr>
<td>Power Supply</td>
<td>DC 12 V</td>
</tr>
<tr>
<td>Anti-vibration</td>
<td>5.9g</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-45 °C ~ +70 °C, RH 95% max</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-45 °C ~ +80 °C, RH 95% max</td>
</tr>
<tr>
<td>Lens</td>
<td>3.6mm Optional</td>
</tr>
<tr>
<td>Lens Angle</td>
<td>120°</td>
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# Troubleshooting

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<th>Possible Causes/Solutions</th>
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<tr>
<td>No picture/sound</td>
<td>Adaptor is connected incorrectly. Improper power supply. Unit is off.</td>
</tr>
<tr>
<td>No picture</td>
<td>Check cable connection.</td>
</tr>
<tr>
<td>No sound</td>
<td>Audio cable improperly connected. Volume is off or set very low.</td>
</tr>
<tr>
<td>Dark picture</td>
<td>Adjust brightness/contrast. Low environmental temperature.</td>
</tr>
<tr>
<td>No color</td>
<td>Adjust the color settings.</td>
</tr>
<tr>
<td>Upside down/inverted picture</td>
<td>Use horizontal/vertical selection switch on remote control.</td>
</tr>
<tr>
<td>Backup camera does not display when car is in reverse</td>
<td>Check reverse connection.</td>
</tr>
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ONE YEAR WARRANTY
REAR VIEW SAFETY, INC. WARRANTS THIS PRODUCT AGAINST MATERIAL DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF PURCHASE. WE RESERVE THE RIGHT TO REPAIR OR REPLACE ANY SUCH DEFECTIVE UNIT AT OUR SOLE DISCRETION. REAR VIEW SAFETY, INC. IS NOT RESPONSIBLE FOR A DEFECT IN THE SYSTEM AS A RESULT OF MISUSE, IMPROPER INSTALLATION, DAMAGE OR MISHANDLING OF THE ELECTRONIC COMPONENTS. REAR VIEW SAFETY, INC. IS NOT RESPONSIBLE FOR CONSEQUENTIAL DAMAGES OF ANY KIND.
THIS WARRANTY IS VOID IF: DEFECTS IN MATERIALS OR WORKMANSHIP OR DAMAGES RESULT FROM REPAIRS OR ALTERATIONS WHICH HAVE BEEN MADE OR ATTEMPTED BY OTHERS OR THE UNAUTHORIZED USE OF NONCONFORMING PARTS; THE DAMAGE IS DUE TO NORMAL WEAR AND TEAR, THIS DAMAGE IS DUE TO ABUSE, IMPROPER MAINTENANCE, NEGLECT OR ACCIDENT; OR THE DAMAGE IS DUE TO USE OF THE REAR VIEW SAFETY, INC. SYSTEM AFTER PARTIAL FAILURE OR USE WITH IMPROPER ACCESSORIES.

WARRANTY PERFORMANCE
DURING THE ABOVE WARRANTY PERIOD, SHOULD YOUR REAR VIEW SAFETY PRODUCT EXHIBIT A DEFECT IN MATERIAL OR WORKMANSHIP, SUCH DEFECT WILL BE REPAIRED WHEN THE COMPLETE REAR VIEW SAFETY, INC. PRODUCT IS RETURNED, POSTAGE PREPAID AND INSURED, TO REAR VIEW SAFETY, INC. OTHER THAN THE POSTAGE AND INSURANCE REQUIREMENT, NO CHARGE WILL BE MADE FOR REPAIRS COVERED BY THIS WARRANTY.

WARRANTY DISCLAIMERS
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If you have any questions about this product, contact:

*Rear View Safety, Inc.*
1797 Atlantic Avenue
*Brooklyn, NY 11233*
800.764.1028

**Better Cameras. Better Service.**
*IT’S OUR GUARANTEE.*